

Amendments to the Drawings:

Enclosed are 21 sheets of Replacement drawings depicting Figure(s) 1-15d. Please substitute these drawings for those currently on file in the subject application.

REMARKS

Claims 1-40 are pending in the application, and are rejected in the Office Action mailed October 1, 2008. The Examiner is kindly asked to review and consider the remarks and amendments herein, which are believed to be fully responsive to the outstanding Office Action and to place the application in condition for allowance. Claims 2-3, 5-7 and 31 are cancelled without prejudice or disclaimer of the subject matter therein, new claims 41-43 are added; and claims 1, 22, 23, 30, 32 and 40 are amended by this response. Therefore, the claims 1, 4, 8-30 and 32-43 remain pending in the application.

I. Claim Rejections –Double Patenting under 37 CFR 1.75

Should claims 1-3 be found allowable, claims 22, 31 and 40 stand objected to under 37 CFR 1.75 as being a substantial duplicate thereof. 37 CFR 1.75 (b) specifies that more than one claim may be presented provided they differ substantially from each other and are not unduly multiplied. With the cancellation of dependent claims 2, 3 and 31, all of the remaining claims 1, 22 and 40 subject to this objection differ substantially from each other. However, despite the cancellation of dependent claims 2, 3 and 31, Applicants are not in any way forfeiting the doctrine of claim differentiation.

Since original claims 5-7 depended from now cancelled claim 2, and since the feature of claim 2 is substantially incorporated in claim 40, duplicates of now cancelled claims 5-7 have been added as new claims 41-43, dependent upon claim 40.

II. Claim Rejections – 35 U.S.C. section 102(b) based on Bloch et al.

Claims 1, 2, 4, 6, 9, 11-17, 19-21, 30-35 and 37-40 stand rejected under 35 U.S.C. 102(b) as being anticipated by Bloch et al US 4,688,105, hereinafter referred to as Bloch. This rejection includes independent claims 1, 30, 33 and 40. Therefore, although certain of the dependent claims are rejected under 35 U.S.C. 103(a), the remarks in this section apply to allowability of these independent claims together with all of their dependent claims, that is, claims 1-21 and 30-43.

A. The invention.

The present invention relates to the capture and display of sequences of motion images and more particularly relates to an apparatus and method for producing more compelling video programs by a consumer. As is well known, in motion picture studios scenes are shot according to a schedule that is best suited for production and are later assembled at an editing facility, according to a scripted storyboard. According to embodiments of the present invention, the consumer is provided with at least some measure of storyboard capability for event-based imaging with an edited appearance. In particular, the consumer benefits from director-like guidance (i.e., the *digital director*, as referenced in the specification in numerous places) in shooting appropriate scene content and benefits from an ability to customize *a plurality of consumer-captured image sequences*, suited to the subject, audience, and event.

With this as background, it is important to be mindful of the novel and unobvious possibilities afforded by digital capture and digital manipulation of the captured digital files:

As can be seen from the above description, the *digital director* takes advantage of the capabilities afforded by *digital image capture* and *random-access storage* of image sequences and allows effective use of imaging tools disclosed in both U.S. Patent Nos. 6,292,219 and 5,477,264, while adding prompt/response sequences and automatic assembly of image sequences that both customize and simplify the image capture process. *Digital director* capability can be effectively used to guide a relatively unskilled operator through the sequence of steps necessary to produce a pleasing and effective theme- or event-based video presentation. (Page 14, lines 1-9, italics added.)

Use of a random access storage device, as contrasted with accessing a continuous analog video stream, provides the ability to insert *a plurality of consumer pre (or post)-captured image sequences*, as well as pre-stored image sequences and effects, at suitable points in the digital storyboard image sequence in order to display a pleasing motion picture presentation without abrupt scene changes. When operating according to the present invention, the apparatus and method function as a digital director, providing operator guidance and automated image processing utilities that enable even an unskilled operator to

capture and construct a presentation from a plurality of image sequences that can have the appearance of a professionally prepared production.

Inasmuch as digital capture and processing of *a plurality of camera operator-captured digital image sequences* characterizes one aspect of the invention, this feature has been emphasized in independent claims 1, 22, 30, and 40 in order to further define the invention. Specifically, paragraph (a) of each claim now reads as follows:

- (a) a digital camera operated by the camera operator for capturing the plurality of said image sequences;

B. The prior art.

As understood, and in contrast with Applicants' system and method, the analog video recording system of Bloch incorporates a video camera permanently fixed in the rear compartment of a video recording booth (see FIG. 5 of Bloch), as follows:

A video recording system enables self-service production of vended videocassette recordings to a user or customer, with user control of several features. Preferably the system includes forming a composite video picture with the user's image in combination with a user-selected background sequence. Compositing may be by chromakeying, with a key color as a backdrop behind the user in a recording booth. As the composite video recording is made the user preferably is able to watch the composite image on a monitor, which may also include prompting messages for the user. A preferred control for the system involves control data encoded on a videodisc, which also holds a plurality of selectable background sequences. (Abstract)

It is important to realize that in Bloch the video camera is operated for a preset period to capture a timed sequence of video that is fed directly to a videodisc for sale to the consumer:

The user (or users), upon inserting money, token, credit card or upon starting the operation in some other way, proceeds to talk, sing or otherwise perform in front of the camera *for a preset limited time period, at the end of which time the user is dispensed a videocassette* or other recorded medium containing his/her image and sound. (col. 1, lines 51-57, italics added)

Though several other options are offered, they all pertain to the background, audio, or character sequences that may be combined with the live video feed, and recorded on the videodisc. For example,

With the added chromakey function it becomes possible for a user to "interact" with a prerecorded video sequence of any sort *while the interaction is itself being recorded.* (col. 2, lines 47-51, italics added)

These passages indicate that, while the optional background, audio or character sequences may be pre-recorded, the video sequence captured by the video camera is always live and saved only on the output videodisc that is sold to the customer. As shown in FIG. 8 of Bloch, the live video feed from the camera 49 is fed directly, via the chromakey function 41 and the character summer 144, to the output monitors 12 and 37 and/or the VCRs 33 and 34 (audio may also be added). As understood, there is no facility in the system disclosed to record anything other than a live feed of the event of interest from the video camera 49. In particular, *no disclosure or suggestion has been found of any capability for capturing and storing a plurality of image sequences* of the event of interest, and then later inserting them into the presentation, e.g., according to a pre-established storyboard.

C. Independent claims 1, 30 and 40

Consequently, the ability of the claimed invention to handle a plurality of image sequences is an important distinction from booth-based systems such as described by Bloch. This ability is reflected in the claims, for instance, in the preamble and paragraphs (a) and (b) of claims 1, 30 and 40:

1 (30 and 40). An image processing system for obtaining *a plurality of image sequences* and assembling a presentation from *the plurality of image sequences* as part of a video program prepared by a camera operator, the system comprising:

(a) a digital camera operated by the camera operator for capturing *the plurality of said image sequences*;

(b) a random-access electronic memory for temporary storage of *the plurality of said image sequences*;....

In addition, paragraph (e) of claims 1 and 40 specifies arranging the playback of a presentation of the plurality of image sequences,

(e) a control logic processor for executing the pre-programmed instructions and for arranging playback of said presentation from *the plurality of said captured image sequences* stored in said random-access electronic memory according to said operator responses.

and amended paragraph (d) (i) of claim 30 similarly specifies arranging the playback of a presentation of the plurality of image sequences via the displayed instructions,

(i) a display for viewing said image sequences and presenting pre-programmed instructions to the operator for arranging playback of said presentation *from the plurality of said captured image sequences*;

While it seems clear that Bloch provides no disclosure or suggestion of any capability for capturing and storing a plurality of image sequences, and then later inserting them into a presentation, the Office Action appears to have effectively imputed such a capability into Bloch to handle a plurality of image sequences by arguing that

“...Bloch discloses....(b) a random-access electronic memory (153) *for temporary storage of the plurality of said image sequences (column 10 lines 53-59)*;...(e) a control logic processor (45) for executing the pre-programmed instructions and *for arranging playback of said presentation from the plurality of said captured image sequences stored in said random-access electronic memory* according to said operator responses (column 9 line 22 through column 10 line 32, column 10 lines 53-59 and column 11 lines 22-37; where the control instructions from the video disc are read by the MCU which then performs corresponding control of the system). (e.g., Pages 3-4 of the Office Action, italics added.)

However, as pointed out above, Bloch is understood to be incapable of producing a plurality of image sequences, much less storing and arranging them into a playback presentation. This conclusion does not appear to be rebutted by the Office Action’s citations. The referenced column 10, lines 53-59 of Bloch is understood to refer to using a RAM 153 as a frame buffer for storing graphics, such as limited lines of text provided by the user of the photo booth to apply ancillary titles, phrases, or simple sketched graphics to a fixed sequence recording. The “user generated graphics” further referred to in column 10, lines 59-61 of Bloch are understood to be of the type that users can input via a graphic pad or keypad - in other words, simple single frame sketches, and not captured image sequences from the video camera 49. In further support of this interpretation, RAM 153 is also referenced in column 9 lines 35-44:

In a preferred embodiment there is also a prompt displayed on the booth monitor 37 requesting user to enter certain data, name, data etc., on the keyboard 22 to be added to the keyed video signal 88 for recording. This data is stored in random access memory (RAM) 153 (FIG. 14) in the MCU 45 for insertion at the appropriate time as determined by signals 140 encoded on the videodisc and sent to the demodulator 46. The name might appear in a title sequence, as a caption, in the credits, etc.

This is further indication that the “frame buffer” is used to store graphics, and not a plurality of image sequences. Consequently, it appears clear that no means or apparatus is provided in Bloch for capturing or storing image sequences in this, or any other, random-access memory. More particularly, as understood in Bloch, the camera 49 does not capture a plurality of image sequences, the cited RAM 153 (or any other memory) does not store any captured image sequence (plural or not) from the camera 49, and the microprocessor unit (MCU) 45 does not arrange playback of the presentation of any plurality of image sequences.

Bloch is understood to describe an analog capture system incapable of recording, storing, and rearranging imaging sequences. For instance, as described in Bloch the video camera output (line 87) is an analog signal and not digital image data:

...The camera output (line 87) is an RGB signal actually consisting of three lines. a single-line video signal 75 from the camera 49 may be sent directly to the video signal switcher 89 to allow for other uses of the invention not involving the chromakeyer. (column 7, lines 60-64.)

This indicates that the camera of Bloch is incapable of producing the digital image files required to change or modify the original image capture sequence. This is also true for the VCR's 33 and 34, which are both serial analog recording devices. (the recording formats are VHS or Beta, see column 9, lines 28-30). There is no disclosure or suggestion of a storage device capable of storing the digital motion images. Also, all of the interconnection and switching devices are for conventional analog video signals, not digital image files.

Anticipation under 35 U.S.C. Section 102 requires the disclosure in a single piece of prior art of each and every limitation of a claimed invention. Applicants respectfully submit that Bloch fails to disclose, as set forth in the amended claims, at least the above-discussed features of independent claims 1, 30

and 40. Consequently, in view of these remarks, claims 1, 30 and 40, and their corresponding dependent claims, are believed to be allowable over Bloch in view of 35 U.S.C. 102(b).

D. Independent claim 33.

Similarly, the ability of the claimed invention to form a presentation from a set of image sequences by utilizing an electronic storyboard is an important distinction from the system described by Bloch. This ability is reflected in paragraphs (a) through (e) of claim 33, as follows:

33. A method for forming a presentation comprising *a set of image sequences captured using an electronic camera*, the method comprising:

- (a) obtaining programmed instructions *for capturing members of the set of image sequences*;
- (b) assembling an electronic storyboard, according to the programmed instructions, comprising a plan for the arrangement of *said members of the set of image sequences made at least in part before their capture*;
- (c) *prompting the camera operator to obtain individual members of said set of said image sequences* by displaying operator instructions to the camera operator;
- (d) *storing said set of said image sequences* in a memory;
- (e) assembling the presentation *using said set of said image sequences*, according to said electronic storyboard; and
- (f) recording the presentation onto a storage medium.

As pointed out above, Bloch is understood to be incapable of producing a set of image sequences, much less arranging members of the set into a playback presentation. Consequently, it is noted that step (a), that is, obtaining programmed instructions for capturing members of the set of image sequences, has not been found in Bloch. But just as importantly, step (b), that is, assembling an electronic storyboard, according to the programmed instructions, comprising a plan for the arrangement of said members of the set of image sequences, is likewise not found anywhere in Bloch. To understand why, reference is made to the specification of the present invention,

... electronic storyboard 70 specifies an ordered arrangement of *image sequences*. This can include graphics 54 and title text 68 as well as planned segments 76, *which are allotted for captured image sequences 64 when these are obtained*. Transitions 66 are also provided between captured *image sequences 64*. These transitions may be fades, graphics, segues, or other scene transitions, using any of the techniques

described in U.S. Patent No. 6,292,219, listed above or other familiar transitional mechanisms between captured image sequences 64.

Electronic storyboard 70 as shown in Figure 9a is highly conceptual. In practice, any number of methods could be used *for arranging captured image sequences 64 beforehand*. However, Figure 9a shows the basic principles: a plan is generated for incorporating *captured image sequences* with pre-stored images and special effects loaded as part of the digital director data. (page 9 line 31 – page 10, line 11).

A point to take from this passage is that the scene sequences are shot according to a schedule best suited for the event or theme at hand, such as a birthday party, and then assembled according to a pre-existing storyboard prepared beforehand (as indicated by the italicized sections in the passage). In other words, the electronic storyboard is assembled according to the programmed instructions, comprising a plan for the arrangement of said members of the set of image sequences, at least in part before their capture. None of this is understood to be disclosed or in any way suggested by Bloch. Moreover, claim 33 indicates that the electronic storyboard is assembled at least in part before capture of the image sequences.

Anticipation under 35 U.S.C. Section 102 requires the disclosure in a single piece of prior art of each and every limitation of a claimed invention. Applicants respectfully submit that Bloch fails to disclose, as set forth in the previously presented claims, at least the above-discussed features of independent claim 33. Consequently, in view of these remarks, claims 33-39 are believed to be allowable over Bloch in view of 35 U.S.C. 102(b).

III. Claim Rejections – 35 U.S.C. section 103(a) based on Bloch et al.

Claims 3, 5, 7, 8, 10, 18, 22-29 and 36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bloch. This rejection includes independent claims 22 and 23. Therefore, the remarks in this section apply to allowability of these independent claims together with all of their dependent claims, that is, claims 24-29. Dependent claims 3, 5, 7, 8, 10, 18 and 36, which also stand rejected, are believed to be allowable at least in view of the allowability of their parent claims, namely claims 1 and 33, as pointed out earlier.

For the rejection of claim 18, the Examiner has taken Official Notice that both the concepts and advantages of video wipes simulate zooming

and panning. Applicants herewith traverse this Official Notice, pointing out that wiping is a gradual spatial transition from one image to another image. Most often one image is replaced by another with a distinct edge. Consequently, it is submitted that it is not common knowledge or clear and unmistakable that video wipes teach the zooming and panning of Claim 18, as suggested by the Examiner. Consequently, Applicants request that the Examiner provide documentary evidence supporting this Official Notice in accordance with MPEP 2144.03.

Claim 22 incorporates all the features of amended claim 1. However, as pointed out above, Bloch is understood to be incapable of producing a plurality of image sequences, much less arranging them into a playback presentation as required by independent claim 22. Moreover, Bloch does not provide the claimed “random-access electronic memory for temporary storage of the plurality of said image sequences”. Claim 23 has been amended to incorporate the sensor capturing and *storing a plurality of motion video sequences*, and

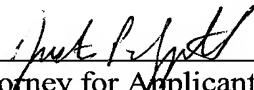
a control logic processor for executing the pre-programmed instructions and for arranging playback of said presentation from the audio recording and *the plurality of said captured motion video sequences* stored in said digital memories

As noted above, Bloch is understood to be incapable of producing and storing a plurality of motion video sequences, much less arranging them into a playback presentation including audio as required by independent claim 23.

For obviousness to be found, the claimed combination of elements must be obvious to one of ordinary skill in the art from the teaching of Bloch. Lacking any suggestion of the features identified above, Applicants respectfully submit that nothing has been found in the Bloch reference, alone or in combination with the Official Notice, that would have rendered the claimed invention obvious as a whole to one of ordinary skill in the art with respect to each of the claims 22 and 23. Therefore, the Examiner is respectfully asked to withdraw the rejection of these claims under 35 U.S.C. 103(a) and to consider allowance of the claims.

It is believed that the foregoing is a complete response to the Office Action and that the claims are in condition for allowance. The Examiner is respectfully requested to withdraw the outstanding rejection and to pass the subject application to Allowance.

Respectfully submitted,



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Attachment: Replacement Sheets

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.